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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,519	09/26/2003	Todd Ames	2005.16	1181

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EXAMINER

VANATTA, AMY B

ART UNIT PAPER NUMBER

3765

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/672,519

Applicant(s)

AMES ET AL.

Examiner

Amy B. Vanatta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 092304, 030404.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 8, 10, 11, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Document 60-26537 to Suzuki et al .

JP 60-26537 discloses a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by at least two banding jets (14 and 18). The tow is deregistered by rollers 16a,16b and 17a,17b (see page 5, lines 19-26). The device 18 has "a guide to control the width of the tow" (see page 5, lines 29-31). This guide shapes the deregistered tow as claimed and forms a means for shaping as in claim 10. It is disclosed that the shaped tow is led to conveyor 19 to be covered with pulverized pulp 21 (page 5, lines 33-34). It is disclosed that this pulp may include absorbent polymer powder (page 5, lines 34-35), which is a "particulate" as claimed. This particulate (i.e. the powder mixed with the pulp) is distributed onto the shaped tow as in claim 1. Spreader 20 forms a means for distributing the particulate onto the tow, as in claim 10. The two banding jets 14 and 18 each have a width, as in claims 2 and 11. Compressed gas (air) is supplied

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to the banding jets as in claims 4 and 13 (page 5, line 18). Regarding claims 8 and 17, the tow is shaped to a substantially rectangular cross section as seen in Figs. 3A-3C.

3. Claims 1, 2, 4, 8-11, 13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ames et al (US 6,253,431).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by a first banding jet 130. The tow is deregistered by roller assemblies 40, 60, 70 (see col. 4, lines 21-25 and col. 5, lines 1-4). The apparatus includes an air opening device 240. The air opening device includes at a first end an air jet 248 which includes a source of compressed air 250 and an air manifold 254 through which the air is delivered to jet orifices 256 (col. 6, lines 21-45). This air partially opens and expands the tow so that it increases in cross-sectional area (col. 7, lines 8-17). Thus, the air jet 248 with orifices 256 forms a second banding jet which spreads the tow in a direction perpendicular to the tow's travel, as in claims 1 and 10. The forming chamber 260 and accumulating chamber 262 perform a step of shaping the deregistered tow as in claim 1, and form a means for shaping as in claim 10 (col. 6, lines 42-57). A particulate is distributed onto the shaped tow by assembly 120, as in claims 1 and 10. The two banding jets (130, 248) each have a width, as in claims 2 and 11. Compressed gas (air) is supplied to the banding jets as in claims 4 and 13. Regarding claims 8 and 17, the tow is shaped to a substantially rectangular cross section (col. 6, lines 56-57). A liquid is applied to the tow by liquid additive assembly 80, as in claims 9 and 18.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-7 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document 60-26537 to Suzuki et al.

JP 60-26537 discloses a method and apparatus as claimed, however the pressure of the compressed air which is supplied to the banding jets is not disclosed. It is within the ordinary skill in the art, however, to determine through routine experimentation the optimal pressure for the air of the banding jets depending upon the type and density of tow material which is being processed, and other parameters and conditions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to supply the compressed air of the method and apparatus of Suzuki et al at a pressure within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Claims 5-7 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ames et al (US 6,253,431).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite as claimed, however the pressure of the compressed air which is

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supplied to the banding jets is not disclosed as being within the ranges recited in claims 5-7 and 14-16. It is within the ordinary skill in the art, however, to determine through routine experimentation the optimal pressure for the air of the opening jets depending upon the type and density of tow material which is being processed, and other parameters and conditions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to supply the compressed air of the method and apparatus of Ames et al at a pressure within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

7. Claims 1-18 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Ames et al (US 6,253,431) in view of Watson (US 3,796,035).

In US 6,253,431, Ames et al disclose a method and apparatus for making an absorbent composite including spreading a crimped tow in a direction perpendicular to the tow's travel by a first banding jet 130. The tow is deregistered by roller assemblies 40, 60, 70 (see col. 4, lines 21-25 and col. 5, lines 1-4). The forming chamber 260 and accumulating chamber 262 perform a step of shaping the deregistered tow as in claim 1, and form a means for shaping as in claim 10 (col. 6, lines 42-57). A particulate is distributed onto the shaped tow by assembly 120, as in claims 1 and 10.

Regarding the recitation in claims 1 and 10 of "at least two banding jets", it appears that the air jet 248 forms a second banding jet. Assuming *arguendo* that the jet

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248 is not a "banding jet" within the claimed meaning of the term, it is noted that providing a second banding jet which is separate and distinct from the other elements of the device is well known in the art. Watson (US 3796035) discloses a method and apparatus which includes at least two banding jets for spreading the tow. Specifically, Watson shows a first banding jet 13 for spreading the tow, and a second banding jet 24 for further spreading the tow to a wider width after deregistering the tow. The two banding jets disclosed by Watson each have a width, as in claims 2 and 11, with the width of the downstream banding jet being greater, as in claims 3 and 12. One having routine skill in the art would recognize that it would be advantageous to provide a second banding jet in the method and apparatus of Ames et al to further widen the tow to a greater width, in the manner as taught by Watson, so that the tow is widened in increments so as to achieve a wider tow with less stress on the filaments, as is well known in the art. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide at least two banding jets in the method and apparatus of Ames et al in order to produce a wider tow which is incrementally spread, such as taught by Watson. Compressed gas (air) is supplied to the banding jets of both Ames et al and Watson as in claims 4 and 13. Regarding claims 8 and 17, the tow of Ames et al is shaped to a substantially rectangular cross section (col. 6, lines 56-57). A liquid is applied to the tow by liquid additive assembly 80, as in claims 9 and 18.

Regarding claims 5-7 and 14-16, the pressure of the compressed air which is supplied to the banding jets of Ames is not disclosed as being within the ranges recited

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in claims 5-7 and 14-16. It is within the ordinary skill in the art, however, to determine through routine experimentation the optimal pressure for the air of the opening jets depending upon the type and density of tow material which is being processed, and other parameters and conditions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to supply the compressed air of the method and apparatus of Ames et al at a pressure within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

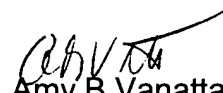
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 571-272-4995. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 571-272-4983. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Amy B Vanatta  
Primary Examiner  
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